

03040206-150

(Waccamaw River)

General Description

Watershed 03040206-150 is located in Georgetown and Horry Counties and consists primarily of the **Waccamaw River** and its tributaries from Socastee Creek (AIWW) to Winyah Bay. The watershed occupies 53,922 acres of the Coastal Zone region of South Carolina. The predominant soil types consist of an association of the Leon-Bohicket-Lynn Haven-Hobonny-Chipley series. The erodibility of the soil (K) averages 0.10; the slope of the terrain averages 1%, with a range of 0-2%. Land use/land cover in the watershed includes: 32.9% forested land, 22.9% forested wetland, 12.7% urban land, 12.5% scrub/shrub land, 9.3% water, 8.6% nonforested wetland, 0.7% agricultural land, and 0.4% barren land.

This section of the Waccamaw River accepts drainage from its upper reaches, together with Oatbed Creek, Seven Prongs, Peach Creek, Old River (Nimrod Creek), Clark Creek, Big Swamp, Old Dock Creek (Righthand Creek), and Silvers Creek. Bull Creek enters the river next followed by Prince Creek, Vaux Creek, Silver Creek, Collins Creek, Cow House Creek, and Black Creek (White Creek). Sandhole Creek (Ruinsville Creek, Crane Creek) enters the river next followed by Springfield Creek, Brookgreen Creek, Pawleys Creek, Oatland Creek, Waverly Creek, Butler Creek, Schooner Creek, Caledonia Creek (Duncan Creek) and Jericho Creek. There are a total of 55.7 stream miles, 575.5 acres of lake waters, and 3,008.5 acres of estuarine areas in this watershed. The Waccamaw River is classified FW* (dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.5) from the top of the watershed to the river's confluence with Thoroughfare Creek. The tributaries along this portion of the river are classified FW. Downstream of the confluence, the river is classified SA* (dissolved oxygen not less than 4.0 mg/l) and its tributaries are classified SA.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
MD-146	P	FW*	WACCAMAW R. & AIWW 1 MI BELOW JCT, BUCKSPORT LANDING
MD-137	S	FW*	WACCAMAW R. NEAR MOUTH OF BULL CK AT CHANNEL MKER 50
MD-138	P	FW*	WACCAMAW RIVER AT CHANNEL MARKER 57
(MD-080)	P	SB	WINYAH BAY @ MARKER 92 AT MOUTH OF PEE DEE AND WACCAMAW RIVERS

Waccamaw River & Atlantic Intracoastal Waterway (MD-146) - Aquatic life uses are not supported due to occurrences of zinc in excess of the aquatic life acute standards and dissolved oxygen excursions. In addition, there was a high concentration of zinc measured in 1995, a very high concentration of both zinc and copper measured in 1997, and a significant decreasing trend in dissolved oxygen. There is a significant increasing trend in pH. A Total Maximum Daily load (TMDL) has been approved for this area. This will result in decreased loadings of oxygen demanding substances to the system (see p. 206, Watershed Protection and Restoration Strategies, for more information on the TMDL). Significant

decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported.

Waccamaw River - There are three monitoring sites along this section of the Waccamaw River and recreational uses are fully supported at all sites. At the upstream site (**MD-137**), aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen. A significant decreasing trend in turbidity suggests improving conditions for these parameters. At the downstream site (**MD-138**), aquatic life uses are also fully supported; however, there is a significant decreasing trend in dissolved oxygen. In addition, a very high concentration of zinc was measured in 1996, and a high concentration of lead was measured in 1997. **MD-080** is physically located in 03040201-170, but also reflects a mixing area of waters including Winyah Bay (03040207-040) and this section of the Waccamaw River. Aquatic life uses are fully supported at **MD-080**; however, there is a significant decreasing trend in dissolved oxygen. Significant decreasing trends in five-day biochemical oxygen demand and total suspended solids suggest improving conditions for these parameters. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT	NPDES# TYPE LIMITATION
WACCAMAW RIVER GSW&SA/SCHWARTZ PLANT PIPE #: 001 FLOW:13.51 WQL FOR DO,NH3N,BOD5	SC0037753 MAJOR DOMESTIC WATER QUALITY
WACCAMAW RIVER CITY OF MYRTLE BEACH/WTR RECLAMATION PIPE #: 001 FLOW: 17.0 WQL FOR DO,NH3N	SC0039039 MAJOR DOMESTIC WATER QUALITY
WACCAMAW RIVER GCW&SD/MURRELLS INLET WWTP PIPE #: 001 FLOW: 2.0 WQL FOR NH3N,BOD5	SC0040959 MAJOR DOMESTIC WATER QUALITY
WACCAMAW RIVER GEORGETOWN COUNTY PIPE #: 001 FLOW: 9.0-12.0 WQL FOR DO	PROPOSED MAJOR DOMESTIC WATER QUALITY
WACCAMAW RIVER HAGLEY LAKE CO., INC. PIPE #: 001 FLOW: M/R WACCAMAW RIVER GSW&SA/BULL CREEK WTP PIPE #: 001 FLOW: 1.1	SCG730044 MINOR INDUSTRIAL EFFLUENT SC0043699 MINOR DOMESTIC WATER QUALITY

WQL FOR TRC

WACCAMAW RIVER
GSW&SA/BUCKSPORT WWTP
PIPE #: 001 FLOW: 0.2

SC0040886
MINOR DOMESTIC
EFFLUENT

WACCAMAW RIVER
GCW&SD/PAWLEYS AREA WWTP
PIPE #: 001 FLOW: 2.75
WQL FOR NH3N,BOD5

SC0039951
MAJOR DOMESTIC
WATER QUALITY

CLARK CREEK
INTEGRAL FARM MINE
PIPE #: 001 FLOW: M/R

SCG730023
MINOR INDUSTRIAL
EFFLUENT

BROOKGREEN CREEK
GCW&SD/WACCAMAW REGIONAL WTP
PIPE #: 001 FLOW: 0.35
WQL FOR TRC

SCG643001
MINOR DOMESTIC
WATER QUALITY

Nonpoint Source Management Program

Land Application Sites

LAND APPLICATION SYSTEM
FACILITY NAME

ND#
TYPE

SPRAYFIELD
GSW&SA BULL CREEK WTP

ND0069892
DOMESTIC

Mining Activities

MINING COMPANY
MINE NAME

PERMIT #
MINERAL

INTEGRAL FARM & GARDEN SERVICE
INTEGRAL FARM

1051-51
SAND/CLAY

R.L. CAUSEY LANDSCAPING
VEREEN PIT

1053-51
SAND/CLAY

HAGLEY LAKE CO, INC.
HAGLEY MINE

0728-43
SAND

Water Supply

Portions of this watershed fall within the Waccamaw Capacity Use Area and large groundwater uses must be reported (see Capacity Use Program p.23).

WATER USER (TYPE)
STREAM

REGULATED CAPACITY (MGD)
PUMPING CAPACITY (MGD)

GEORGETOWN COUNTY WSD (M)
GEORGETOWN CANAL

4.60
6.90

Growth Potential

There is a high potential for residential and commercial growth in this watershed, which contains portions of the Towns of Bucksport, Surfside Beach, and Murrells Inlet. The area is developed with many residential and resort communities. The area west of the AIWW is accessible only by boat and is not expecting significant growth. Water infrastructure is located throughout most of the watershed, and sewer is currently located in the northern tip as well as in many of the newer developments throughout the region. All areas on the Waccamaw Neck will have sewer services in the near future. Along with resort and residential developments, commercial uses and two large tracts of semi-public land are located along the U.S. Hwy. 17 corridor.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A total maximum daily load (TMDL) for oxygen demanding substances has been developed for the main stem of the Waccamaw River and the Atlantic Intracoastal Waterway (AIWW) in watersheds 02040206-140, 03040206-150, and 03040207-020. The TMDL addresses 12 separate monitoring stations on the State's 1998 303(d) list of impaired waters. The TMDL, based on a maximum 0.1 mg/l deficit allowed in waters that do not meet applicable dissolved oxygen standards due to natural conditions, will result in a decrease of approximately 63% in the permitted oxygen demanding load discharged to the system. The decreased loadings are being implemented through the NPDES permitting system with new, more restrictive limits becoming final at the conclusion of appropriate compliance schedules.

Special Projects

Establishment of National Wildlife Refuge in Coastal South Carolina

In 1997, the U.S. Fish and Wildlife Service established the **Waccamaw National Wildlife Refuge**. The refuge extends over portions of the Pee Dee River and the Waccamaw River incorporating this watershed along with portions of watersheds 03040206-140 and 03040206-150. The purpose of the refuge is to protect and manage an important coastal river ecosystem, which includes a significant number of rare and endangered species, and large contiguous blocks of riverine wetlands and bottomland hardwood forests that provide habitat for wetland-dependent wildlife. The refuge also provides compatible wildlife-dependent recreational activities, such as hunting, fishing, wildlife observation, and environmental education. The refuge was established due to the cooperative efforts of the Winyah Bay Focus Area Task Force, a regional coalition of federal and state agencies, industry, conservation organizations, and citizens.